

### REMARKS

Applicant appreciates the thorough review of the present application as illustrated by the Office Action. Applicant submits that the present case is in form for allowance at least for the reasons discussed below.

#### The Objection to Claim 1:

Claim 1 stands objected to based on an informality. Claim 1 has been amended above as suggested by the Examiner. Accordingly, Applicant requests withdrawal of the objection to Claim 1.

#### The Art Rejections:

Claims 1, 6, 13-14, 20-22 and 24-29 stand rejected under 35 U.S.C. § 102 as anticipated by United States Patent No. 3,125,397 to McGrath ("McGrath"). The remaining claims stand rejected as obvious over McGrath in light of various combinations of other references cited in a substantially similar manner in previous Office Actions. Accordingly, only the reliance on the newly cited McGrath reference will be addressed herein. However, the applicable arguments regarding the secondary references as previously presented are incorporated herein by reference as if set forth in their entirety.

#### **The Independent Claims Are Patentable Over the Cited Art**

Amended Claim 1 recites:

An electrical connector comprising a connector body including a tubular socket configured to receive an electrical conductor, clamping means arranged to secure the electrical conductor within the socket, and a **preformed tubular socket insert fitting within the tubular socket so as to reduce the effective size of the socket**, wherein the socket insert is adapted to be deformed by the clamping means into retaining engagement with the electrical conductor and wherein the clamping means comprises at least one clamping bolt held in at least one respective threaded bore in the connector body such that the at least one clamping bolt extends into the socket so as to clamp, via the socket insert, an electrical conductor inserted in the socket against an opposing surface of the socket.

Applicant submits that at least the highlighted portions of Claim 1 are neither disclosed nor suggested by McGrath.

McGrath describes a connector using an insert that is "a flat stock pressure spring 5," that as seen in Figure 2, is "rolled to substantially a C shape." McGrath, Col. 1, lines 58-60. In operation, the screw 9 "tends to deform the spring and causes it to roll up into a smaller diameter." McGrath, Col. 2, lines 1-2. When the spring of McGrath is located within the socket of the connector, the spring has a main body (6) that defines a channel of generally semi-circular cross-section, and narrow arms (7) that extend from the main body so as to define annular end portions, as shown in Figure 1. In this deformed configuration, the main body is clearly not tubular.

The assertion that such a tubular insert is shown in the Office Action may have been based on an unclear representation of the spring in Figure 1 of McGrath. In Figure 1, the spring may have appeared, at first sight, to be generally tubular in form. However, in light of Figure 2 and a the corresponding descriptive portion of the specification of McGrath indicates that Figure 1 would not be so interpreted by one of skill in the art. A clearer illustration of the spring 5 within the socket of the connector would show that the spring includes a main body 6 of generally semi-circular cross-section and arms 7 that define annular end portions. It is only at its end portions that the spring 5 would have a generally annular cross-section. Between the end portions, along the greater part of the length of the spring it is of C-shaped cross-section and is downwardly open such that the electrical conductor is in direct contact with the base of the socket.

As such, Applicant submits that such a connector arrangement does not disclose the socket insert of Claim 1 as previously pending. However, to further clarify the tubular socket insert of Claim 1, Claim 1 now recites a "preformed tubular" socket insert. Thus, Claim 1 now clearly recites that the insert is preformed into a tubular configuration as illustrated in Figure 1 of the present application. In contrast, the spring 5 of McGrath is formed in a generally flat shape and then rolled for insertion into the socket 2, which maintains the flat stock pressure spring 5 in a rolled up configuration. Thus, McGrath fails to disclose or suggest the socket insert of Claim 1 and the rejection off Claim 1 and the claims that depend therefrom should be withdrawn for at least these reasons. The rejections of independent

Claims 9, 13, 21 and 22, and the claims that depend therefrom, should be withdrawn for substantially the same reasons based on corresponding recitations found therein. Independent Claim 21 is also separately patentable for the reasons discussed with reference to dependent Claims 25, 27 and 32 below.

### **The Dependent Claims Are Patentable Over the Cited Art**

The dependent claims are patentable at least based on their dependence on patentable independent claims as discussed above. In addition, various of the dependent claims are separately patentable. For example, Claim 2 recites that the socket insert is "aluminum." The Office Action asserts that United States Patent No. 5,630,737 to DuPont ("DuPont") discloses use of aluminum for a socket insert and that DuPont would be combined with McGrath "to make the socket insert as taught in DuPont." Office Action, p. 4. As an initial matter this rejection should be withdrawn as it fails to even allege any motivation other than to assert if combined they would be combined. Furthermore, as described above, the use of flat spring material for the insert is critical to the operability of the connector of McGrath. Even if Dupont was combined with McGrath to make the spring 5 aluminum, the resulting product would be inoperative as the insert could not be inserted and resiliently rolled as described in McGrath. Accordingly, Claim 2, and Claims 10, 19, are also separately patentable for at least these reasons.

Claims 3-5, 11-12, 15-16, 18 and 23 include various recitations regarding features of the socket insert. Again, the Office Action relies on combinations of McGrath with various previously cited references in rejecting these claims. However, Applicant submits that, given the rolling flat stock pressure spring used in McGrath, one of skill in the art would clearly not be motivated to combine with spring 5 with any such features disclosed in the secondary references. Any such shape variations would appear to degrade or preclude operability of the connector of McGrath. Accordingly, Claims 3-5, 11-12, 15-16, 18 and 23 are also separately patentable for at least these reasons.

Claims 25 and 27, newly added dependent Claim 32 and independent Claim 21 include various recitations related to the insert reducing eccentricity of the positioning of the electrical conductor in the socket. The Office Action asserts that such recitations are

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disclosed by Figure 1 of McGrath. Office Action, p. 3. The spring 5 seen in Figures 1 to 3 of McGrath clearly does not reduce the eccentricity of the positioning of an electrical conductor within the socket. This can be best seen in Figure 3 of McGrath, where it is shown in dotted line that the arms 7 of the spring 5 reside within grooves 10 formed in the interior surface of the socket. As such the conductor 11, as seen in Figure 3, is not displaced by the spring. Accordingly, Claims 21, 25 and 32 are separately patentable for at least these additional reasons.

The remaining newly added dependent claims are also separately patentable. For example, new Claim 30 recites that the insert is "an extruded tubular structure." The use of an extruded insert is described in the specification of the present application, for example, at page 4, lines 14-15. Such a structure is clearly not disclosed by the flat stock pressure spring 5 of McGrath. Accordingly, Claim 30 is also separately patentable for at least these reasons. Claim 31 recites that the insert is a "circumferentially continuous tubular structure with no overlying layers." In contrast, the flat stock pressure spring 5 of McGrath is rolled to provide an overlapping structure. Accordingly, Claim 31 is also separately patentable for at least these reasons.

### **Conclusion**

Applicant respectfully submits that, for the reasons discussed above, the references cited in the present rejections do not disclose or suggest the present invention as claimed. Accordingly, Applicant respectfully requests allowance of all the pending claims and passing this application to issue.

Respectfully submitted,



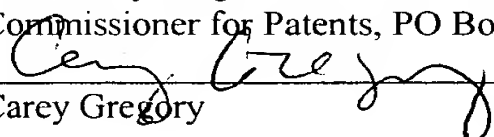
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